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(54) Title: ENERGY-ACTIVATED COMPOSITIONS FOR CONTROLLED SUSTAINED RELEASE OF A GAS

(57) Abstract: A composition for energy-controlled generation and release of at least one gas, which includes an energy-activated catalyst capable of being activated by electromagnetic energy, and a solid or a liquid containing anions capable of being oxidized by the activated catalyst or reacted with species generated during activation of the catalyst to generate at least one gas. The composition, when exposed to electromagnetic energy, is capable of generating and releasing the gas after activation of the catalyst and oxidation or reaction of the anions.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/10804

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : Please See Extra Sheet.

US CL : Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : Please See Extra Sheet.

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WEST USPAT

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,783,105 A (ZHANG et al.) 21 July 1998, see abstract, column 4, lines 28-55, the examples, and claims.	1-27, 36-63, 64-67, 75-76
X	US 5,772,897 A (HANCOCK) 30 June 1998, see the abstract, examples, and claims.	1-23, 36-63, 75-76
X	US 5,898,126 A (YOSHIDA) 27 April 1999, see the abstract, column 5, lines 30-45, the examples, and the claims.	1-23, 36-63, 75-76
X	US 5,888,528 A (WELLINGHOFF et al.) 30 March 1999, see the abstract, column 12, lines 20-30, and the claims.	1-23, 36-63, 75-76, 78
X	US 5,340,605 A (SILVER et al.) 23 Aug 1994, see the abstract, examples, and claims.	1-23, 38-50

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,411,643 A (CAWFIELD et al.) 02 May 1995, see the abstract, examples, and claims.	1-23, 38-63
X	US 5,244,811 A (MATTHEWS) 14 September 1993, see the abstract, column 5, lines 8-20, column 3, lines 67-68, column 4, lines 13-26, and the claims.	1-12, 24-26, 38-50, 64-67, 78
X	US 5,736,165 a (RIPLEY et al.) 07 April 1998, see the abstract, column 5, lines 44-64, examples, and claims.	1-11, 24-28, 31, 34-35, 38-50, 68, 71, 74, 78
Y	US 5,849,200 A (HELLER et al.) 15 December 1998, see the abstract, examples, and claims.	1-78
X	US 5,872,072 A (MOURI et al.) 16 February 1999, see the abstract, column 11, lines 12-48, examples, and claims.	1-78
Y,P	US 5,965,264 A (BARENBERG et al.) 12 October 1999, see the abstract, examples, and the claims.	1-78
A	US 5,880,067 A (LINKOUS) 09 March 1999, see the abstract, examples, and claims.	1-78

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